

MOISTURE AND MOLD **PREVENTION** AND CONTROL TIPS

MOISTURE Control is the Key to **Mold Control**



Mold growing on the surface of a unit ventilator.

- When water leaks or spills occur indoors - **ACT QUICKLY.** If wet or damp materials or areas are dried 24-48 hours after a leak or spill happens, in most cases mold will not grow.

- Clean and repair roof gutters regularly.
- Make sure the ground slopes away from the building foundation, so that water does not enter or collect around the foundation.
- Keep air conditioning drip pans clean and the drain lines unobstructed and flowing properly.



Condensation on the inside of a window-pane.

- Keep indoor humidity low. If possible, keep indoor humidity below 60 percent (ideally between 30 and 50 percent) relative humidity. Relative humidity can be measured with a moisture or humidity meter, a small, inexpensive (\$10-\$50) instrument available at many hardware stores.

- If you see condensation or moisture collecting on windows, walls or pipes - ACT QUICKLY to dry the wet surface and reduce the moisture/water source. Condensation can be a sign of high humidity.

Actions that will help to reduce humidity:

- ◆ Vent appliances that produce moisture, such as clothes dryers, stoves, and kerosene heaters to the outside where possible. (Combustion appliances such as stoves and kerosene heaters produce water vapor and will increase the humidity unless vented to the outside.)
- ◆ Use air conditioners and/or de-humidifiers when needed.
- ◆ Run the bathroom fan or open the window when showering. Use exhaust fans or open windows whenever cooking, running the dishwasher or dishwashing, etc.

Actions that will help prevent condensation:

- ◆ Reduce the humidity (see preceding page).
- ◆ Increase ventilation or air movement by opening doors and/or windows, when practical. Use fans as needed.
- ◆ Cover cold surfaces, such as cold water pipes, with insulation.
- ◆ Increase air temperature.

Mold growing on a wooden headboard in a room with high humidity.



Renters: Report all plumbing leaks and moisture problems immediately to your building owner, manager, or superintendent. In cases where persistent water problems are not addressed, you may want to contact local, state, or federal health or housing authorities.



Rust is an indicator that condensation occurs on this drainpipe. The pipe should be insulated to prevent condensation.

Testing or sampling for mold Is sampling for mold needed? **In most cases, if visible mold growth is present, sampling is unnecessary.**

Since no EPA or other federal limits have been set for mold or mold spores, sampling cannot be used to check a building's compliance with federal mold standards. Surface sampling may be useful to determine if an area has been

adequately cleaned or remediated. Sampling for mold should be conducted by professionals who have specific experience in designing mold sampling protocols, sampling methods, and interpreting results. Sample analysis should follow analytical methods recommended by the American Industrial Hygiene Association (AIHA), the American Conference of Governmental Industrial Hygienists (ACGIH), or other professional organizations.

HIDDEN MOLD



Mold growing on the back side of wallpaper.

Suspicion of hidden mold You may suspect hidden mold if a building smells moldy, but you cannot see the source, or if you know there has been water damage and residents are reporting health problems. Mold may be hidden in places such as the back side of dry wall, wallpaper, or paneling, the top side of ceiling tiles, the underside of carpets and pads, etc. Other possible locations of hidden mold include areas inside walls around pipes (with leaking or condensing pipes), the surface of walls behind furniture (where condensation forms), inside ductwork, and in roof materials above ceiling tiles (due to roof leaks or insufficient insulation).

Investigating hidden mold problems Investigating hidden mold problems may be difficult and will require caution when the investigation involves disturbing potential sites of mold growth. For example, removal of wallpaper can lead to a massive release of spores if there is mold growing on the underside of the paper. If you believe that you may have a hidden mold problem, consider hiring an experienced professional.

Cleanup and Biocides Biocides are substances that can destroy living organisms. The use of a chemical or biocide that kills organisms such as mold (chlorine bleach, for example) is not recommended as a routine practice during mold cleanup. There may be instances, however, when professional judgment may indicate its use (for example, when immune-compromised individuals are present). In most cases, it is not possible or desirable to sterilize an area; a background level of mold spores will remain - these spores will not grow if the moisture problem has been resolved. If you choose to use disinfectants or biocides, always ventilate the area and exhaust the air to the outdoors. Never mix chlorine bleach solution with other cleaning solutions or detergents that contain ammonia because toxic fumes could be produced.

Please note: Dead mold may still cause allergic reactions in some people, so it is not enough to simply kill the mold, it must also be removed.

Water stain on a basement wall — locate and fix the source of the water promptly.



ADDITIONAL **RESOURCES**

For more information on mold related issues including mold cleanup and moisture control/condensation/humidity issues, visit:

www.epa.gov/mold



Mold growing on fallen leaves.

This document is available on the Environmental Protection Agency, Indoor Environments Division website at: www.epa.gov/mold

NOTES

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Please note that this document presents recommendations. EPA does not regulate mold or mold spores in indoor air.